Paper reference 31761H

Pearson BTEC

Level 3 Nationals Certificate,
Extended Certificate, Foundation Diploma,
Diploma, Extended Diploma

INFORMATION TECHNOLOGY

UNIT 2: CREATING SYSTEMS TO

MANAGE INFORMATION

(Part B)

Time: 2 hours plus your additional time allowance

X65921RA

Pearson

YOU MUST HAVE:
activity6.rtf,
activity7.rtf,
partB_database.accdb or
partB_databasemdb

YOU WILL BE GIVEN

- **Nil.**

INSTRUCTIONS

- **Part A and Part B contain the material for the completion of the set tasks under supervised conditions.**

- **There are 40 marks for Part A and 26 marks for Part B, giving a total mark for the set tasks of 66.**

- **Part A and Part B are specific to each series and this material must be issued only to learners who have been entered to take the tasks in the specified series.**

- **Learners MUST ONLY have access to Part B during this examination session.**

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- **This booklet should be kept securely until the start of the 2 – hour (plus your additional time allowance) supervised assessment period.**

- **Part A materials MUST NOT be accessed during the completion of Part B.**

- **Part A and Part B should be submitted together for each learner.**

- **This booklet should not be returned to Pearson.**

- **Answer ALL activities.**

INFORMATION

- **The total mark for this paper is 26 marks.**

INSTRUCTIONS TO INVIGILATORS is on the next page

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INSTRUCTIONS TO INVIGILATORS

This paper must be read in conjunction with the unit information in the specification and the BTEC Nationals Instructions for Conducting External Assessments (ICEA) document. **See the Pearson website for details.**

Refer carefully to the instructions in this task booklet and the **BTEC Nationals Instructions for Conducting External Assessments (ICEA)** document **to ensure that the assessment is supervised correctly.**

The 2 – hour Part B set task must be carried out under examination conditions.

The database and electronic templates for Activities 6 and 7 are available on the website for centres to download for candidate use.

Learners must complete this task on a computer using the templates provided and appropriate software. All work must be saved as PDF documents for submission.

Invigilators may clarify the wording that appears in this task but cannot provide any guidance in completion of the task.

Invigilators should note that they are responsible for maintaining security and for reporting issues to Pearson.

MAINTAINING SECURITY

- **Learners must not bring anything into the examination environment or take anything out.**
- **Centres are responsible for putting in place appropriate checks to ensure that only permitted material is introduced into the examination environment.**
- **Internet access is NOT permitted.**
- **Learner's work must be regularly backed up. Learners should save their work to their folder using the naming instructions indicated in each activity.**
- **During any permitted break, and at the end of the examination, materials must be kept securely, and no items removed from the supervised environment.**
- **Learners can only access their work under supervision.**
- **User areas must only be accessible during the examination session and only by the individual learners.**

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- **Any materials being used by learners must be collected in at the end of the examination.**
- **Following completion of Part B of the set task, all materials must be retained securely for submission to Pearson.**
- **Part A materials must not be accessed during the completion of Part B.**

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OUTCOMES FOR SUBMISSION

Each learner must create a folder to submit their work.

The folder should be named according to this naming convention:

[Centre #]_[Registration number #]_ [surname]_[first letter of first name]_PartB

Example: Joshua Smith with registration number F180542 at centre 12345 would have a folder titled

12345_F180542_Smith_J_PartB

Each learner will need to submit 3 PDF documents AND their final database within their folder.

The 3 PDF documents should use these file names:

ACTIVITY 6:

activity6_[Registration number #]_ [surname]_[first letter of first name]

ACTIVITY 7:

activity7_[Registration number #]_ [surname]_[first letter of first name]

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ACTIVITY 8:

activity8_[Registration number #]_ [surname]_[first letter of first name]

INSTRUCTIONS FOR LEARNERS is on the next page

INSTRUCTIONS FOR LEARNERS

Read the set task information carefully.

Plan your time carefully to allow for the preparation and completion of all the activities.

Internet access is NOT allowed.

You will complete this set task under supervision and your work will be kept securely at all times.

You must work independently throughout the examination and must not share your work with other learners.

Your invigilator may clarify the wording that appears in this task but cannot provide any guidance in completion of the task.

Part A materials MUST NOT be accessed during the completion of Part B.

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OUTCOMES FOR SUBMISSION

You must create a folder to submit your work.

The folder should be named according to the following naming convention:

[Centre #]_[Registration number #]_[surname]_[first letter of first name]_PartB

Example: **Joshua Smith** with registration number **F180542** at centre **12345** would have a folder titled

12345_F180542_Smith_J_PartB

You will need to submit 3 PDF documents AND your final database within this folder.

The 3 PDF documents should use these file names:

ACTIVITY 6:

activity6_[Registration number #]_[surname]_[first letter of first name]

ACTIVITY 7:

activity7_[Registration number #]_[surname]_[first letter of first name]

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ACTIVITY 8:

activity8_[Registration number #]_ [surname]_[first letter of first name]

Part B SET TASK BRIEF **is on the next page**

Part B SET TASK BRIEF

You are advised to spend 10 minutes (plus your additional time allowance) reading the Task Scenario and the activities you are to complete.

You may make notes and/or highlight information to use in the completion of the documents you need to produce for your task.

TASK SCENARIO

'Washerpool College' has partially developed a database that will eventually merge with the database you created in Part A.

A subject has a level, which is no lower than 1 and no higher than 3.

There are a number of tests for each subject.

The tests can be used many times.

The results of the tests are recorded.

The database will record information about the subjects and test results.

Part B SET TASK

You must complete ALL activities within the set task.

Produce your documents using a computer.

Save your documents in your folder ready for submission using the formats and naming conventions indicated.

ACTIVITY 6 is on the next page

ACTIVITY 6: FORMS – You are advised to spend 1 hour and 10 minutes (plus your additional time allowance) on this activity.

NOTE

- **The structure of the tables provided should not be changed in any way, e.g. do not add validation, do not change data types.**
- **You will be required to use all of the tables.**

  Create an efficient interface that will facilitate database input by producing:

  (a)   an input form to add a subject.

  - **The form should be ready for data entry.**
  - **The subject title must be present.**
  - **The level must be within the specified range.**
  - **The user should be able to select a faculty for a subject.**
  - **Valid data should be appended to the subject table and a save message should display.**
  - **A suitable error message should appear where invalid data has been used.**

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ACTIVITY 6 continued

(b) an input form to add test results.
- **The form should NOT include validation for any fields.**
- **The form should NOT include an automated routine to save the data.**
- **When the form opens the date of the latest test week must display automatically in a field.**
- **There must be a combo box for the subject. This must contain only the subjects that have a test in the test week displayed on the form.**
- **Once the user has selected a subject the form must display the maximum mark for that subject's test in a field.**
- **The user must then be able to input into fields:**
  - **the number of students who took the test**
  - **the highest mark achieved**
  - **the lowest mark achieved.**

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ACTIVITY 6 continued

- **These details should then be calculated and displayed in fields:**
  - **the highest mark as a percentage**
  - **the lowest mark as a percentage.**

Evidence your interface as screenprints using the given activity6.rtf template.

Your screenprints must show:

- **the DESIGN view and FORM view of all the forms you have created**
- **the DESIGN view of any queries you have created and used with the forms including fields and criteria**
- **the DATASHEET view of any queries you have created and used with the forms**
- **details of any calculations, validation and macros / code you have created and used with the forms.**

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ACTIVITY 6 continued

Ensure sufficient information is provided to allow a competent third party to maintain the database.

Save the evidence of your interface as a PDF in your folder for submission as

activity6_[Registration number #]_ [surname]_[first letter of first name]

(Total for Activity 6 = 14 marks)

ACTIVITY 7: INTERFACE TESTING – You are advised to spend 20 minutes (plus your additional time allowance) on this activity.

Test the interface of your relational database using appropriate test data (normal, erroneous and extreme as appropriate).

You must provide evidence of FORM LEVEL testing that proves:

1. the subject form is ready for data entry when the form opens
2. an invalid faculty cannot be selected for a subject
3. a record will save in the subject table if all of the required data is present and valid
4. when the test result form opens the date of the latest test week must display automatically in a field
5. once the user has selected a subject the form must display the maximum mark for that subject's test in a field

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Turn over

ACTIVITY 7 continued

6. once the user inputs the highest and lowest marks achieved these details should then be calculated and displayed in fields:

- the highest mark as a percentage
- the lowest mark as a percentage.

Complete the test log to show how you have tested your input forms using the given **activity7.rtf** template.

Save your test log as a PDF in your folder for submission as

activity7_[Registration number #]_ [surname]_[first letter of first name]

(Total for Activity 7 = 6 marks)

ACTIVITY 8: INTERFACE EVALUATION – **You are advised to spend 20 minutes (plus your additional time allowance) on this activity.**

Evaluate your interface.

You should consider

- **the quality, performance and usability of the interface you have created in terms of how well:**

  - **the subject form ensures that:**
    - **it is ready for data entry when the form opens**
    - **a subject level cannot be above the top of the range**
    - **a subject level cannot be below the bottom of the range**
    - **an invalid faculty cannot be selected for a subject.**

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ACTIVITY 8 continued

- **the test result form ensures that:**
  - **when it opens the date of the latest test week must display automatically in a field**
  - **there must be a combo box for the subject. This must contain only the subjects that have a test in the test week displayed on the form**
  - **once the user has selected a subject the maximum mark for that subject's test must be displayed in a field**
  - **the user can input into fields:**
    - **the number of students who took the test**
    - **the highest mark achieved**
    - **the lowest mark achieved.**
  - **these details are calculated and displayed in fields:**
    - **the highest mark as a percentage**
    - **the lowest mark as a percentage.**

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ACTIVITY 8 continued

Save your evaluation as a PDF in your folder for submission as

activity8_[Registration number #]_ [surname]_[first letter of first name]

(Total for Activity 8 = 6 marks)

TOTAL FOR PART B = 26 MARKS

END OF PAPER